AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 1, line 22, which starts with "Abrasive particles are used in the most" with the following amended paragraph:

Abrasive particles are used in the most varied particle sizes in bonded and loose form for the most varied abrasive processes. For example, in a mixture together with ceramic masses or artificial resin, they are shaped into abrasive discs, with the ceramic masses or artificial ~~reins~~ resins serving as binder for the abrasive particle. In the case of abrasives on a backing (paper, linen cloth, etc.), adherence to the backing is realized, as a rule, by way of synthetic resin bonding. However, the efficiency of the various abrasives is not only influenced by the abrasive particles used, but to a high degree also by the bonding of the particles to the abrasive. In this respect, the interface between the abrasive particle and the binder phase is of particular significance. It determines the force required to break an abrasive particle from any bonding. The harder and more steadfast an abrasive particle is, the greater are the requirements of the bonding and the adhesive forces on the interfaces, and the easier it will be to break a particle out of its binding. Most abrasive particles, in particular those that are produced by a melting process, have a relatively smooth surface that proves to be disadvantageous for the bonding that relies primarily on adhesion. This holds true in particular for abrasives bonded by synthetic resins in which the binding is based almost exclusively on adhesion. Therefore, in the past, a large number of measures have been suggested to roughen up or, respectively, to enlarge the surface, thereby improving the binding.

Please replace the paragraph beginning at page 4, line 1, which starts with "Also, the intended fine-grain particles" with the following amended paragraph:

Also, the intended fine-grain particles involve abrasion-active agents that are fused with a glass frit and that are supposed to form a surface that is as smooth as possible; this ~~mans~~ means that here, too, the specific surface of the abrasive particle is enlarged only to a minor extent.

Please replace the paragraph beginning at page 4, line 12, which starts with "Surprisingly, the objective strived at" with the following amended paragraph:

Surprisingly, the objective strived at could be reached by first wetting abrasive particles on the basis of molten or sintered corundums, zirconium corundums, silicon carbide and boron carbide in a mixer with 0.05-2.0 weight % with an aqueous silicon solution, preferably colloidal ~~cilicic~~ silicic acid, and subsequently sheathing them with 0.05-5.0 weight %, in each case relative to the mass of the starting particle, of a complex fine-grained oxide compound of the general formula $A_xB_yO_z$, with A and B each being a group of elements and O being oxygen present in a stoichiometric ratio, and the numbers x, y and z denoting the composition of the complex oxides and not being limited to whole numbers, and z corresponding to a product of the sum of (x+y) and a factor of between 1.5 and 2.5. The group of elements A concerns the group of the metals in the periodic system of elements while the group of elements B concern the group of amphoteric elements in the periodic system. The complex, fine grained oxide compound $A_xB_yO_z$ contains at least one element A from the group of the metals in the periodic system of the elements and at least one element B from the group of the amphoteric elements, as well as oxygen in the stoichiometric ratio to A and B. Depending on the heat resistance of the abrasive particle to be sheathed, a heat treatment between 100 and 900° C. is provided, following the sheathing process, to improve the adhesion of the sheathing.

Please replace the paragraph beginning at page 5, line 1, which starts with "In comparison with other, similarly fine-grained" with the following amended paragraph:

In comparison with other, similarly fine-grained materials that are used in accordance with the state of the art for an enlargement of the surface and an improvement of the bonding, the positive effect of the fine-grained complex oxides used in accordance with the invention for the bonding of the abrasive particle and thus for the abrasion performance of the abrasive is considerably more pronounced which will be explained later by way of examples. One explanation of this positive effect is thus not only to be found in the enlargement of the surface area of the abrasive particles through the complex, fine-grained oxide compounds which adhere well to the surface of the particle via the silicate binder, and in the special surface structure of the

particles which increases the binding forces that are mostly based on adhesion. In addition, the complex fine-grained oxide compounds of the invention are thermodynamically very stable and thus reaction resistant. During any abrasion process with high mechanical and/or thermal stress on the particle, almost no disintegration or reactions take place with the material to be abraded or the abrasive particle. The cause for that is possibly the special oxide composition between metallic and amphoteric elements. Another advantage results from the good wetting of the abrasive particle as well as of the complex oxide composition through the silicon binder, preferably through colloidal ~~cilicic~~ silicic acid. In conjunction with a thermal treatment of the sheathed particle adjusted to the thermal stability of the particle, this results in an optimal adhesion of the complex oxide compound.

Please replace the paragraph beginning at page 6, line 11, which starts with "For every 5 cutting-off wheels" with the following amended paragraph:

For every 5 cutting-off wheels, 780 g of abrasive particles were first mixed with 55 g of liquid resin (phenol resin), and this mixture was subsequently blended with 240 g of a powder mixture consisting of 50.0 weight % of phenol powder resin, 25.0 weight % of cryolite, 24.0 ~~weight % pf~~ weight % of pyrite and 1.0 weight % of CaO. After that, a corresponding portion of the mixture was pressed into discs with a 178 mm diameter and a thickness of 2.8 mm and hardened at 180° C. for 14 hours.

Please replace the paragraph beginning at page 7, line 27, which starts with "5.0 kg of FRSK F36 semi-special fused alumina" with the following amended paragraph:

5.0 kg of FRSK F36 semi-special fused alumina were wetted with 0.2 weight % colloidal silicic acid (LUDOX HS 30 of Du Pont) and, following an additional mixing period of 3 minutes, sheathed with 0.2 weight % of titanium manganese antimony rutile (pigment PK12100 of Ferro Corp.) with an approximate composition of 10 ~~eight %~~ weight % of MnO_2, 24 weight % of Sb_2O_3 and 66 weight % of TiO_2. Following an additional mixing period of 2 minutes the particle was fired for one hour at 800° C. and subsequently processed into cutting-off wheels.

Please replace the paragraph beginning at page 9, line 6, which starts with "5.0 kg of eutectic zirconium corundum ZK 40 F36" with the following amended paragraph:

5.0 kg of eutectic zirconium corundum ZK 40 F36 was wetted in the lab intensive mixer with 0.2 weight % of colloidal silicic acid (Ludox HS30) and, following an additional mixing period of 3 minutes, sheathed with 0.2 weight % of titanium oxide pigment. Following an additional mixing period of 2 minutes, heat treatment occurred at 400° C. The sheathed particle was used to produce cutting-off ~~wheels in t~~ wheels in the manner described above which were then tested with regard to their abrasive properties.